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OCCIPITO-POSTERIOR POSITIONS.[1]

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YOUR Committee hoped that Dr. S. H. MacCulloch would be able to read a paper on "Occipito-Posterior Positions" and give us the benefit of his great experience in the management of these cases. He was invited to do so and was willing to write a paper, but unfortunately his health prevented him from attempting it. As I had been associated with him at The Women's Hospital for several years and had thus had an opportunity of learning many of his methods, I offered to write a paper and embody as much of his teachings as I knew.

In the paper presented to you tonight, I am solely responsible for all that it contains. Dr. S. H. MacCulloch has, however, kindly discussed certain details of the management of the cases with me and it is a great regret to me that he was unable to discuss the whole question and give us his mature views in a paper of his own.

Occipito-posterior positions present many interesting points for discussion. The first point is: Why does the fœtus develope in an occipito-posterior position? I do not here refer to a persistent occipito-posterior, but to the ordinary right occipito-posterior or left occipito-posterior position which may or may not eventually become a persistent occipito-posterior position. I have searched textbooks in vain for the cause. My explanation is that if a fertilized ovum becomes implanted in a retroverted or retroflexed uterus, the fœtus will develope in a posterior position.

John H. Teacher[1] in a paper on "The Implantation of the Human Ovum and the Early Development of the Trophoblast" asserted that the fertilized ovum has two poles, an entering or implantation pole and an adhering or closing pole. He believes that the determining cause of implantation is the attainment by the ovum of that stage of development in which the cells of the implantation pole become capable of penetrating into the maternal tissues, and the necessity for a different mode of nutrition. Normally this would occur when the ovum was in the cavity of the uterus and in the usual situation, namely the

[1] Read at the annual meeting of the Section of Gynæcology and Obstetrics of the New South Wales Branch of the British Medical Association on December 16, 1925.

upper part of the uterus and about nine to ten days after fertilization. These remarks were based on microscopical observations of early ova.

The placenta usually developes at the site of implantation and opposite to the abdomen of the child. The uterus in the majority of cases is anterior in position and anterior positions of the fœtus are more common than posterior; so that as the placenta is most commonly on the posterior wall, the site of implantation of the ovum is on the posterior or upper wall of the uterus. In a retroverted uterus the anterior wall of the uterus will be uppermost, implantation will tend to occur in this wall, the placenta to develope there and a posterior position of the child result. What grounds have I for making these remarks?

Some years ago a patient consulted me because she wished to have a child. She had been married for several years, had been pregnant only once and had miscarried about the third month. She had a retroverted uterus which I could not replace and which remained retroverted in spite of treatment. After some months she became pregnant with the uterus still retroverted. She adopted the genu-pectoral posture twice daily till the uterus became an abdominal organ, at term the fœtus was in the right occipito-posterior position. One does not very often have such opportunities of observing the conditions before and during pregnancy as in this case, but I have very frequently noted that patients with retroversion early in pregnancy subsequently have the child in a posterior position at term. In my experience this is true in the majority of cases.

Diagnosis.

The ease with which occipito-posterior positions are diagnosed, varies greatly. The general description is that the breech is felt at the fundus, the back well towards one or other flank, the limbs prominent in front, the head in the lower uterine segment, the fœtal heart is heard well out in the flank. But in many cases it is exceedingly difficult to map out the fœtal parts accurately, because the thick, doughy mass of the placenta on the anterior uterine wall intervenes between the examiner's hands and the fœtal parts. Therefore, think of a posterior position whenever there is difficulty in accurately and easily outlining the fœtus in a head presentation in an otherwise normal case; when the anterior shoulder is 2·5 centimetres (one inch) or more from the middle line of the mother and on the same side as the back; when fœtal movements are felt all over the abdomen, for in anterior positions they are usually only on one side; when there is premature rupture of membranes in a head presentation; when by examination *per vaginam* the presenting part seems crowded to the front against the pubic arch and there is plenty of space between the head and the sacrum; when there is unusual delay in the first or second stage of a head presentation; when a large fontanelle is easily felt towards the front *per vaginam;* lastly, when there is undue difficulty in delivering with the forceps a patient in whom you anticipated no trouble. This latter procedure, of course, should never occur nowadays, though in the past it often occurred and then led the obstetrician to feel for the ear which led him to the truth. In a patient long in labour when abdominal diagnosis cannot be made, if by *per vaginam* examination the frontal and occipital bones are felt driven under the parietals which are overlapping each other, the fœtus is in an occipito-posterior position.

Frequency of Occipito-Posterior and of the Persistent Occipito-Posterior Positions.

Statistics about the frequency of occipito-posterior positions and of persistent occipito-posterior positions vary greatly. Many right-sided positions will be unanimously diagnosed as anterior positions and many just as definitely as posterior positions, but in a considerable number the position appears to be midway between the two. De Lee classifies this as *occipito dextra transversa* or *occipito læva transversa* when there is a similar left-sided position. In these the head lies before labour with its antero-posterior diameter in the transverse diameter of the brim of the pelvis. At the onset of labour the position becomes either anterior or posterior, in my experience the occiput in the majority of these cases undergoes favourable rotation, though not invariably.

At the Women's Hospital, Crown Street, last year in a series of 1,145 vertex presentations the following positions were noted:

Left occipito-anterior	703 or 61·4%
Right occipito-anterior	340 or 29·6%
Right occipito-posterior	69 or 6·02%
Left occipito-posterior	31 or 2·7%

Tweedy and Wrench[2] found 130 cases of persistent occipito-posterior positions in 13,511 deliveries, that is one in 104. Gibbon Fitzgibbon[3] states that persistent occipito-posterior positions occur in something under 1% of all vertex presentations. Henry C. Cowles[4] in a series of 312 occipito-posterior positions found 36·8% persistently posterior. In my series 53% of the occipito-posterior positions became persistently posterior, that is one in every twenty-two of the vertex presentations. As five of these patients had twins which were not both posterior, I shall exclude them from my remarks.

TABLE I.—SHOWING THE POSITIONS IN FORTY-SEVEN CASES OF FAVOURABLE ROTATION AND FORTY-EIGHT CASES OF MALROTATION.

Number of Cases.	Position.	Favourable Rotation.	Malrotation.
65	Right occipito-posterior	33	32
30	Left occipito posterior	14	16

Malrotation then is more apt to occur in *multiparæ* than in *primiparæ*, 67% of *multiparæ* as against 24% *primiparæ*.

Causation of Persistent Occipito-Posterior Positions.

Why does an occipito-posterior position become persistent?

TABLE II.—SHOWING RESULTS OF ROTATION IN THIRTY-SEVEN PRIMIPARÆ AND IN FIFTY-EIGHT MULTIPARÆ.

Favourable Rotation.				Malrotation.			
Primiparæ (28).		Multiparæ. (19).		Primiparæ. (9).		Multiparæ. (39).	
R.O.P.	L.O.P.	R.O.P.	L.O.P.	R.O.P.	L.O.P.	R.O.P.	L.O.P.
19	9	14	5	7	2	25	14

The determining factor is imperfect flexion of the head. There are several factors which may cause flexion of the head to be incomplete:

(i.) A small head or what comes to much the same thing a large pelvis. In these cases the head is apt to descend on to the floor of the pelvis without having encountered sufficient resistance at the pelvic inlet to cause complete flexion.

(ii.) Weak uterine contractions or a pelvic floor weakened by previous lacerations may diminish respectively the force of the descent and the resistance to it and so lead to incomplete flexion.

(iii.) When the fœtus lies with its spine against the spine of the mother, its natural convexity is undone and is replaced by a straightening of the spine with which a certain amount of extension of the head is inevitably associated.

(iv.) In posterior positions the wide biparietal diameter of the head lies behind the oblique diameter of the pelvis, where there is less room owing to the promontory of the sacrum, instead of in front of it, as in anterior positions when there is more room. In this way the occiput may meet with more resistance than the sinciput. This will more readily occur with a large head, especially if there is a slightly flat pelvis.

(v.) Anything that would mechanically prevent anterior rotation of the head or that would hold back the child's trunk and thus keep the back posterior, for example *placenta prævia*, tumours in the wall of the uterus, scars in the uterus which give the lower uterine segment an irregular shape, a full rectum or bladder *et cetera*.

(vi.) Primary brachycephalia, the two head levers being of the same length and flexion not occurring.

(vii.) Obliquity of the uterus to the right with the fœtus in a right occipito-posterior position with the head fixed at the brim causes some extension of the head. The propelling force of the uterus is directed downwards and to the left and tends to drive down the part on the left side more than that on the right.

(viii.) Pendulous abdomen, the convex back of the fœtus fitting better to the posterior arched wall of the uterus and the abnormal direction of the uterine force.

Indications of Favourable or Unfavourable Progress.

Can we get any indications during labour whether the head will rotate favourably or unfavourably?

By Pawlik's grip during labour if the head is still fairly high and feels almost equally prominent on both sides, imperfect flexion is present and therefore malrotation probable. By carefully locating the anterior shoulder, as Professor Windeyer[5] has pointed out and noting the progress much help can be obtained. If during labour, the anterior shoulder comes towards the middle line favourable rotation is occurring, whereas if it is moving more towards the flank and away from the middle line, malrotation is occurring.

If by the pelvic grip in abdominal palpation the chin is felt at a definitely higher level than the occipital protuberance, the head is well flexed and favourable rotation will probably occur. When the cervix will admit the examining finger it will be possible to feel:

(i.) The posterior fontanelle easily in cases in which the head is fully flexed and in these cases favourable rotation will always occur;

(ii.) Both anterior and posterior fontanelles in cases in which the head is not fully flexed. In this case the occiput will usually rotate to the front, unless the anterior fontanelle is at a lower level;

(iii.) The anterior fontanelle only, when the head is still more extended. In a few of these favourable rotation will occur, but the persistent occipito-posterior case comes almost entirely from this group.

Prognosis.

In the present series of one hundred cases two mothers died and eleven infants.

Maternal Deaths.

CASE I.—A *primipara* with a persistent right occipito-posterior presentation gave birth to a living male child of 3·4 kilograms (seven and a half pounds). Duration of labour was indefinite. The patient had an *ante partum* hæmorrhage from a marginal *placenta prævia*. A de Ribes bag was inserted, manual rotation and forceps delivery and manual removal of the placenta were carried out. The patient had a *post partum* hæmorrhage and hæmorrhage into the broad ligament. Sepsis supervened and she died on the sixteenth day.

CASE II.—The patient had given birth to twelve children. Duration of labour was indefinite. She had a persistent left occipito-posterior presentation with obstructed labour at the brim with an extraperitoneal hæmorrhage. Forceps delivery was unsuccessful so the child, a male, was delivered by craniotomy. The mother died on the fifth day.

Perineal Laceration.

Rupture of the perineum occurred in thirty cases, as shown in Table III.

Vaginal lacerations alone were noted in one case.

TABLE III.—SHOWING DEGREE OF LACERATION OF THE PERINEUM IN ELEVEN CASES OF FAVOURABLE ROTATION AND NINETEEN CASES OF MALROTATION.

Degree of Laceration.	Favourable Rotation.	Malrotation.
First degree	6	16
Second degree	5	2
Third degree..	0	1

Length of Stay in Hospital.

The length of the patients' stay in hospital was as follows:

33% of the patients were discharged on the tenth day (normal).
57% of the patients were discharged within 12 days.
73% of the patients were discharged within 14 days.
17% of the patients were discharged between 15 and 21 days.
8% of the patients were discharged over 21 days.

Thus 25% remained in hospital for over fourteen days.

Complications.

Occipito-posterior positions are frequently complicated by some other conditions. Forty of these patients had complications, tabulated as follows:

Pyelitis	2
Chronic nephritis	1
Albuminuria	1
Placenta prævia	3
Adherent placenta	2
Ante partum hæmorrhage	4
Third stage hæmorrhage	2
Post partum hæmorrhage	8
Primary inertia	5
Primary and secondary inertia	1
Subinvolution	4
Premature rupture of membranes	1
Rigid *os*	1
Prolapse of cord	1
Hydramnios	1
Sapræmia	1
Secondary anæmia	1
Twins	5

Uterine douche was given fifteen times and in three cases it was repeated.

Fœtal Mortality.

Eleven infants died. Six were still-born, two were macerated and in three others death occurred thirty minutes, forty-five minutes and four days respectively after birth (see Table IV.). Four of the infants were premature and in addition one was the second of twins and one had been subjected to craniotomy because of obstruction at the brim, one had *spina bifida*. In every instance a persistent occipito-posterior position was present; in seven the position was persistent right occipito-posterior and in four the position was left occipito-posterior. In eight the fœtus was born in the posterior position and all mothers except one were *multiparæ*. Prolapse of the cord accounted for one and in two mothers *ante partum* hæmorrhage occurred. These results are shown in Table IV.

According to De Lee[6] "Schultze estimated 5% of children as still-born dying during labour and 1·5% die shortly after birth, the result of the trauma of birth. In Paris 9% die, in Glasgow 13·6% and in Edinburgh 11·5%." These are figures given for all labours and all agree that the fœtal mortality in occipito-posterior positions is much higher than in anterior positions.

Treatment Adopted in this Series.

In this series of one hundred cases forty-three mothers were delivered of fœtuses which were in the persistent occipito-posterior position and thirty-nine of these deliveries were unaided. Compare these with some recent articles in the *American Journal of Obstetrics and Gynecology*, in which it is stated that forceps delivery is required in 100% of persistent occipito-posterior cases.

TABLE IV.—SHOWING FŒTAL MORTALITY.

Case.	Parity of Mother.	Hours in Labour. 1st Stage.	Hours in Labour. 2nd Stage.	Child.	Result.	Sex.	Weight.	Mechanism.	Treatment *et cetera*.
1	2	14h. 0m.	4h. 25m.	2nd, twin	Stillborn	Male	5½ pounds	R.O.P. (pers.)	Delivery P.O.P.
2	5	Indefinite	Indefinite		Stillborn	Female	7½ pounds	L.O.P. (pers.)	Instrumental, P.O.P.
3	8	3h. 45m.	0h. 35m.	8 months	Stillborn	Male	5½ pounds	R.O.P. (pers.)	Delivery P.O.P., *ante partum* and *post partum* hæmorrhage.
4	7	26h. 15m.	6h. 45m.		Stillborn	Male	9½ pounds	R.O.P. (pers.)	Manual rotation and instruments.
5	12	Indefinite	Indefinite	?Premature	Craniotomy	Male	..	L.O.P. (pers.)	Attempted instruments and craniotomy; labour obstructed at brim and extra peritoneal hæmorrhage; mother died fifth day.
6	1	75h. 30m.	4h. 50m.		Stillborn	Male	10½ pounds	R.O.P. (pers.)	Prolapse of cord, third stage hæmorrhage, manual rotation, forceps.
7	2	23h. 15m.	2h. 15m.	*spina bifida*	Died fourth day	Female	8½ pounds	R.O.P. (pers.)	Instrumental P.O.P., *spina bifida*.
8	3	26h. 15m.	0h. 45m.		Died in forty-five min.	Male	5½ pounds	L.O.P. (pers.)	Delivery P.O.P.
9	5	5h. 30m.	0h. 30m.		Died in thirty minutes	Male	7½ pounds	R.O.P. (pers.)	Delivery P.O.P., *ante partum* hæmorrhage.
10	3	25h. 30m.	1h. 25m.	8 months	Macerated	Male	4½ pounds	R.O.P. (pers.)	Delivery P.O.P.
11	3	14h. 0m.	0h. 40m.	7 months	Macerated	Female	2 pounds	L.O.P. (pers.)	Delivery P.O.P.

Forceps alone were used in seventeen cases. Forceps and manual rotation were used in seven cases. Forceps and manual rotation and de Ribes's bag were used in one case. Forceps and craniotomy were used in one case. Induction and de Ribes's bag were used in one case. De Ribes's bag alone was used in one case. The results of treatment and other particulars of the hundred cases are set out in Table V.

Treatment of Posterior Presentations.

If an antenatal examination about the thirty-sixth or thirty-seventh week reveals an occipito-posterior position, it is possible in many cases to change the position into an anterior one. This may be done by external manipulation or by the Buist method of applying pads and a binder, provided the head is not fixed.

External Manipulation.

In a right occipito-posterior position the child's abdomen looks forward and to the left. The anterior shoulder will be to the right and in front. Stand by the side of the patient, put your hands on the abdomen, the right hand behind the child's anterior shoulder, the left hand in front of the posterior shoulder. By a repetition of gentle pushing movements push the anterior shoulder over to the left side and the posterior shoulder towards the right side. Each push moves the uterus as well as the child and only slightly alters the position of the child in the uterus, but a sufficient repetition of these movements will, unless the *liquor amnii* be unusually deficient or the child's mobility be for some other reason abnormally restricted, bring the back to the front. Sometimes pushing the limbs backward and to the right by the right hand makes the back more accessible to the left hand which can then move it towards the front by a series of gentle pushes. A firm abdominal binder should then be applied until the head is fixed. The manipulations should always be done very gently as rough handling makes the uterus contract and no progress can be made until it again relaxes. Time, patience and gentleness are the three requisites of success.

Buist Method of Abdominal Pads and Binder.

The Buist method consists in applying a long pad about five centimetres (two inches) wide and 3·75 centimetres (one and a half inches) thick about 2·5 centimetres (one inch) from the middle line over the fœtal limbs and extending from the fundus down to the groin. A smaller flat pad is placed over the fœtal back in the angle between the ribs and the iliac crest. A firm abdominal binder is then applied. The pressure of the pads makes the fœtus alter its position into an anterior one.

I have found that the long pad as described, made by suitably folding a small towel placed over the limbs with its edge 2·5 centimetres (one inch) from the middle line and a firm abdominal binder pinned as tightly over the fundus as the patient can comfortably tolerate, acts quite as successfully as the two pads and is easier for the patient to apply. I examine the patient again in a few days and at weekly intervals and if the position is anterior I leave off the pad and keep the binder on until the head is fixed. I tell the patient to take the binder off for a time, if she is uncomfortable and reapply it again. Once the head is fixed, leave off the binder as the position will not change. I can thoroughly recommend this method to anyone who has not tried it, for it is successful in a large proportion of cases.

Management of a Case During Labour.

If the head is well flexed and none of the conditions are present which will cause extension to occur, labour will go on normally and there is no need to interfere. If labour is not progressing normally, there is probably some extension of the head and the cause of this should be sought for and treated.

One of the commonest causes is uterine inertia. Defective innervation of the uterus shows itself by weak uterine pains, the explanation of which is not definitely known. A probable cause seems to me that in occipito-posterior positions the presentation does not accurately fit the lower uterine segment and so the normal uterine stimulus is absent and irregular contractions occur. This view is supported by the fact that obliquity of the uterus is also often present and if the uterus is manipulated into its normal position and a firm abdominal binder applied so as to cause firm pressure on the fundus and so flex the back of the child strongly and thus force the presentation down more into the lower uterine segment, the pains, weak and irregular before, frequently become normal and stronger. The same is seen if the head, originally high up and posterior, is rotated anteriorly and pushed down into the pelvis. The inertia should also be treated by administering morphine 0·015 gramme (grain one-quarter) and atropine sulphate 0·0004 gramme (grain one one-hundred and fiftieth) and putting the patient to sleep with chloroform and enabling the patient to get a good sleep. An abdominal binder and morphine I have found very great aids in these cases.

Slow dilatation of the *os*, especially in dry labours, is treated by inserting a de Ribes bag. During the long first stage so long as the membranes are intact, mother and child are usually safe.

Indications for Interference During the Second Stage.

The following are indications for interference during the second stage:

(i.) When there are symptoms of impending exhaustion of the mother or rather before these supervene.

(ii.) Threatening exhaustion of the child as revealed by the fœtal heart rate.

(iii.) When the occiput shows no sign of rotating after it has been on the pelvic floor for some time.

(iv.) In cases where persistent occipito-posterior rotation has occurred.

The head may be arrested at the brim, at the level of the ischial spines (deep transverse arrest) at the outlet, with rotation into a persistent occipito-posterior position.

TABLE V.—SHOWING DETAILS OF ONE HUNDRED

Case Number.	Age.	Parity.	Mechanism.	Hours in Labour.		
				First Stage.	Second Stage.	Third Stage.
1	23	Second	R.O.P. (Pers.)	24 hours 15 minutes	0 hours 25 minutes	0 hours 15 minutes
2	22	First	R.O.P. (F.R.)	7 hours 0 minutes	6 hours 30 minutes	0 hours 35 minutes
3	28	Third	R.O.P. (Pers.)	7 hours 30 minutes	0 hours 40 minutes	0 hours 25 minutes
4	32	First	R.O.P. (Pers.)	6 hours 30 minutes	5 hours 5 minutes	0 hours 20 minutes
5	27	First	R.O.P. (F.R.)	13 hours 30 minutes	3 hours 40 minutes	0 hours 30 minutes
6	34	First	R.O.P. (Pers.)	Indefinite	Indefinite	0 hours 25 minutes
7	28	Second	L.O.P. (Pers.)	5 hours 20 minutes	0 hours 20 minutes	0 hours 15 minutes
8	23	First	L.O.P. (F.R.)	17 hours 45 minutes	3 hours 20 minutes	0 hours 15 minutes
9	23	Second	L.O.P. (F.R.)	69 hours 30 minutes	3 hours 30 minutes	0 hours 30 minutes
10	35	Eighth	R.O.P. (F.R.)	Indefinite	Indefinite	0 hours 5 minutes
11	28	First	R.O.P. (F.R.)	29 hours 30 minutes	4 hours 45 minutes	0 hours 25 minutes
12	27	Fourth	R.O.P. (Pers.)	13 hours 0 minutes	7 hours 10 minutes	0 hours 10 minutes
13	28	Fourth	R.O.P. (Pers.)	21 hours 20 minutes	0 hours 35 minutes	1 hour 15 minutes
14	35	Eighth	R.O.P. (F.R.)	25 hours 20 minutes	0 hours 10 minutes	0 hours 10 minutes
15	25	Fourth	R.O.P. / L.O.P. (Pers.)	9 hours 25 minutes	0 hours 8 minutes	0 hours 12 minutes
16	31	Second	L.O.A. / R.O.P. (Pers.)	14 hours 0 minutes	4 hours 25 minutes	0 hours 50 minutes
17	17	First	R.O.P. (F.R.)	16 hours 30 minutes	2 hours 15 minutes	0 hours 25 minutes
18	33	First	R.O.P. (F.R.)	57 hours 15 minutes	4 hours 10 minutes	0 hours 15 minutes
19	35	Fifth	L.O.P. (Pers.)	Indefinite	Indefinite	0 hours 25 minutes
20	45	Eighth	L.O.P. (Pers.)	6 hours 50 minutes	2 hours 50 minutes	0 hours 30 minutes
21	21	First	L.O.P. (Pers.)	21 hours 0 minutes	3 hours 50 minutes	0 hours 40 minutes
22	21	Second	L.O.P. (Pers.)	42 hours 0 minutes	1 hour 35 minutes	0 hours 10 minutes
23	25	First	R.O.P. (F.R.)	43 hours 0 minutes	1 hour 25 minutes	0 hours 20 minutes
24	21	First	R.O.P. (Pers.)	Indefinite	Indefinite	0 hours 20 minutes
25	39	Fourth	L.O.P. (F.R.)	56 hours 30 minutes	1 hour 55 minutes	0 hours 15 minutes
26	39	Twelfth	L.O.P. (F.R.)	12 hours 10 minutes	6 hours 0 minutes	0 hours 35 minutes
27	16	First	R.O.P. (F.R.)	6 hours 15 minutes	2 hours 15 minutes	0 hours 15 minutes
28	21	First	L.O.P. (F.R.)	71 hours 45 minutes	2 hours 0 minutes	0 hours 15 minutes
29	17	First	R.O.P. (F.R.)	25 hours 0 minutes	1 hours 15 minutes	0 hours 5 minutes
30	32	Eleventh	R.O.P. (F.R.)	46 hours 0 minutes	0 hours 15 minutes	0 hours 25 minutes
31	31	Second	R.O.P. (Pers.)	17 hours 15 minutes	1 hour 50 minutes	0 hours 30 minutes
32	21	First	R.O.P. (F.R.)	19 hours 15 minutes	4 hours 45 minutes	0 hours 30 minutes
33	35	Fifth	L.O.P. (Pers.)	5 hours 0 minutes	0 hours 55 minutes	0 hours 40 minutes
34	25	First	R.O.P. (F.R.)	32 hours 20 minutes	5 hours 5 minutes	0 hours 15 minutes
35	24	First	R.O.P. (Pers.)	16 hours 0 minutes	1 hour 50 minutes	0 hours 30 minutes
36	33	Fourth	R.O.P. (Pers.)	Indefinite	Indefinite	0 hours 25 minutes
37	32	Second	R.O.P. (Pers.)	16 hours 30 minutes	0 hours 30 minutes	0 hours 10 minutes
38	22	Second	R.O.P. (F.R.)	3 hours 15 minutes	0 hours 20 minutes	0 hours 15 minutes
39	25	Fourth	R.O.P. (Pers.)	21 hours 30 minutes	0 hours 15 minutes	0 hours 15 minutes
40	32	Fourth	L.S.A. (Pers.) / R.O.P. (Pers.)	16 hours 35 minutes	0 hours 40 minutes	0 hours 10 minutes
41	25	Third	L.O.P. (Pers.)	20 hours 0 minutes	0 hours 45 minutes	0 hours 5 minutes
42	35	Second	R.O.P. (F.R.)	3 hours 30 minutes	1 hour 25 minutes	0 hours 35 minutes
43	21	Second	R.O.P. (Pers.)	3 hours 15 minutes	1 hour 30 minutes	0 hours 10 minutes
44	19	First	L.O.P. (F.R.)	21 hours 30 minutes	2 hours 0 minutes	0 hours 10 minutes

The management of these may be described under the following headings: Podalic version, Cæsarean section, manual rotation and forceps extraction, rotation by forceps, persistent occipito-posterior delivery, craniotomy.

Podalic Version.—Podalic version may be indicated when the head is arrested at the brim or when there is some complication such as flat pelvis, prolapse of cord *et cetera*. In a *primipara* this is usually attended by a large fœtal mortality and much damage to the maternal tissues and so in my opinion is not recommended as the most suitable method, though in a *multipara* better results may be obtained. Personally I have never used it.

Cæsarean Section.—Cæsarean section is indicated when there is some definite pelvic contraction either at the brim or outlet. If the head is high, even after a long first stage in which there have been good strong uterine contractions and the patient is a *primipara* and there is definite overlapping and disproportion, in my opinion a section is the best method of treatment. With the head above the brim, efforts should be made to change the position into an anterior one by external manipulation or by the Buist method, but if these methods fail and the head cannot be made to engage a section should be done. Section is also indicated in *multiparæ* with a history of difficult labour and still-born children, if the head does not engage after a fair test of labour and especially if there is any pelvic contraction or unduly large postmature child. Cæsarean section is not indicated in my opinion if the head has entered the pelvis and there is no contraction at the outlet or obstruction to the birth of the child. In my opinion then it is indicated only in a small proportion of cases in which there is pelvic contraction or obstruction by tumours, central *placenta prævia et cetera* and provided the cervix is not retracted over the head.

Manual Rotation and Application of Forceps.—Manual rotation and application of forceps in my opinion constitute the most suitable method in the vast majority of cases in which interference is indicated. The hand is passed into the vagina, the head pressed gently up to the brim, flexed and rotated well to the front, while at the same time the anterior shoulder is rotated to the front by an assistant or by one's own efforts. The head can then be pushed down into the pelvis and kept there by firm pressure, the patient allowed to come out of the anæsthetic which is always necessary in these cases, and Nature allowed to take its course. I prefer, however, to

OCCIPITO-POSTERIOR PRESENTATIONS.

Child.	Result.	Injury to Perineum.	Length of Stay in Hospital.	Treatment.	Remarks.
F. 6¾ lb.	Alive	Nil	11 days	Delivered P.O.P.	
M. 8 lb.	Alive	Nil	32 days	Forceps	U.D. on 8th and 21st days; pyelitis and mild sapræmia
M. 6½ lb.	Alive	Rupt. 1st	11 days		2nd of twins; 1st L.O.A., P.O.P.
M. 6½ lb.	Alive	Rupt. 1st	10 days	Manual rotat. and forceps	
M. 8¾ lb.	Alive	Rupt. 1st	12 days	Forceps applied	Primary inertia
F. 8 lb.	Alive	Nil	13 days	Manual rotat. and forceps	Early rupt. of memb., rigid *os*, inertia
M. 8½ lb.	Alive	Rupt.	10 days	Delivered P.O.P.	
M. 8 lb.	Alive	Rupt. 2nd	16 days	Instrumental delivery	
M. 7 lb.	Alive	Nil	13 days		Primary inertia
M. 9¼ lb.	Alive	Nil	3½ months[1]	Induction, de Ribes's bag	Marginal *plac. prævv.*, second. anæmia
M. 8 lb.	Alive	Rupt. 1st	13 days	Instrument delivery	
M. 10 lb.	Alive	Nil	14 days	Manual rotat. and forceps	Primary and secondary inertia
M. 11 lb.	Alive	Rupt. 1st	15 days	Delivered P.O.P.	Adherent placenta, P.P.H.
M. 8½ lb.	Alive	Nil	11 days		
M. { 4½ lb. / 4½ lb.	Alive	Nil	15 days		Twins; both delivered P.O.P.
M. 5½ lb.	Still-born	Nil	11 days		2nd of twins, P.O.P.
F. 7¾ lb.	Alive	Nil	10 days		
M. 9¾ lb.	Alive	Vag. Lacer.	12 days	Instrumental	Primary inertia, sub-involution
F. 7¼ lb.	Still-born	Rupt. 1st	24 days	Instrumental delivery, P.O.P.	U.D. 4th day
M. 8 lb.	Alive	Nil	24 days	Manual rotat. and forceps	U.D. on 6th and 13th day
F. 9¾ lb.	Alive	Rupt. 2nd	13 days	Instrumental delivery, P.O.P.	U.D. on 8th day
M. 8½ lb.	Alive	Nil	12 days	Delivered P.O.P.	P.P.H. (atonic)
M. 8 lb.	Alive	Nil	15 days		U.D. on 7th day
M. 7¼ lb.	Alive	Nil	Dd. 16 days	De Ribes's bag, man. rotation and instrumental delivery	Described in detail in text
F. 7 lb.	Alive	Nil	10 days		
M. 9 lb.	Alive	Nil	14 days	Instrumental delivery	Primary inertia
M. 7½ lb.	Alive	Nil	10 days		
M. 8½ lb.	Alive	Rupt. 2nd	13 days	Instrumental delivery	U.D. on 4th day
M. 8 lb.	Alive	Rupt. 2nd	16 days		Sub-involution, U.D. 9th day
M. 7 lb.	Alive	Nil	10 days		
M. 7½ lb.	Alive	Rupt. 1st	10 days	Delivered P.O.P.	
M. 7¾ lb.	Alive	Rupt. 1st	13 days	Instrumental delivery	U.D. on 5th day
F. 7¾ lb.	Alive	Nil	10 days	Delivered P.O.P.	3rd stage hæm.; adherent placenta
M. 8 lb.	Alive	Rupt. 2nd	11 days		
M. 9 lb.	Alive	Rupt. 3rd	38 days	Instrumental delivery, P.O.P.	Endocervicitis
F. 8 lb.	Alive	Nil	10 days	Instrumental delivery, P.O.P.	
M. 7½ lb.	Alive	Rupt. 1st	10 days	Delivered P.O.P.	
M. 7½ lb.	Alive	Rupt. 1st	10 days		
F. 8½ lb.	Alive	Rupt. 1st	27 days	Delivered P.O.P.	P.P.H., subinvolution, U.D. on 6th and 19th days
{ M. 6½ lb. / F. 5¾ lb.	Alive	Nil	16 days	Delivered P.O.P.	P.P.H.
M. 6 lb.	Alive	Nil	10 days	Delivered P.O.P.	
F. 10 lb.	Alive	Nil	11 days P.P.		Hydramnios
M. 7¾ lb.	Alive	Rupt. 1st	13 days	Delivered P.O.P.	

[1] Including 18 days *post partum*.

[TABLE CONTINUED OVER LEAF.

apply the forceps and deliver slowly. If there is difficulty in rotating the shoulders, as there often is and they must be rotated to be successful, passing the hand further up and grasping the shoulder often enables one to rotate the body successfully. Then flex the head and apply the forceps. The head should always be gently pushed up to the brim when possible, as it is usually difficult to rotate the head in the pelvic cavity unless the head is very small. This method is risky if the patient had been long in labour and the uterus contracted down on the child. If there is any sign suggesting impending tonic contraction of the uterus, it should not be attempted or the uterus may rupture. It is sometimes impossible to do this when the head is well down in the pelvis and so jammed that there is not sufficient room for the hand to be inserted.

Rotation by Forceps.—There are several ways of rotating by forceps. One is to apply axis traction forceps while the head is either in the oblique or transverse diameter of the pelvis and pull the head down gently on to the pelvic floor. As traction proceeds, the forceps twist round to the front and should be removed and reapplied until internal rotation is completed. I have occasionally been successful in this way. Another method is to apply the forceps and during rotation the handles should be gently swept round the arc of as large a circle as possible. The forceps should, if possible, press the head gently up to the brim before rotation is done. After rotation the forceps are of course reversed and are removed, reapplied in the ordinary way and the patient is delivered. Laceration of the cervix and vagina is the principal risk, but this is minimized by sweeping the handles round the arc of as large a circle as possible. Another precaution is to flex the head at the outset if possible, otherwise the head may become even more extended during the process of rotation and such large diameters be thrown across the pelvis as to make delivery even more difficult than before. The old fashioned straight forceps is said to be the ideal instrument for this, but few obstetricians have it. I have never tried this method, for with Milne Murray axis traction forceps, such as I use, I think the risks of lacerating the maternal soft parts are too great. Rotation by the Kielland forceps is said to be free from these risks. These forceps have no pelvic curve and are applied to the child's head with the most favourable grip, that is grasping the sides of the head and the head is then gently rotated to the front and birth occurs. When these instruments

TABLE V.—SHOWING DETAILS OF ONE HUNDRED CASES OF OCCIPITO-POSTERIOR POSITION.

Case Number.	Age.	Parity.	Mechanism.	Hours in Labour. First Stage.	Second Stage.	Third Stage.
45	43	Fourth	R.O.P. (Pers.)	12 hours 40 minutes	1 hour 30 minutes	0 hours 10 minutes
46	30	First	R.O.P. (Pers.) L.O.P. (Pers.)	23 hours 0 minutes	1 hour 35 minutes	0 hours 15 minutes
47	24	First	L.O.P. (F.R.)	24 hours 30 minutes	1 hour 55 minutes	0 hours 15 minutes
48	29	Eighth	R.O.P. (Pers.)	3 hours 45 minutes	0 hours 35 minutes	0 hours 5 minutes
49	32	Eighth	R.O.P. (Pers.)	8 hours 30 minutes	0 hours 35 minutes	0 hours 15 minutes
50	18	First	R.O.P. (Pers.)	27 hours 0 minutes	1 hour 0 minutes	0 hours 10 minutes
51	23	Fifth	R.O.P. (Pers.)	2 hours 0 minutes	0 hours 20 minutes	0 hours 5 minutes
52	29	Fourth	R.O.P. (Pers.)	0 hours 50 minutes	0 hours 15 minutes	0 hours 10 minutes
53	26	First	R.O.P. (F.R.)	7 hours 30 minutes	1 hour 0 minutes	0 hours 20 minutes
54	25	Third	L.O.P. (F.R.)	5 hours 40 minutes	0 hours 30 minutes	0 hours 10 minutes
55	24	Second	R.O.P. (Pers.)	8 hours 50 minutes	0 hours 35 minutes	0 hours 15 minutes
56	28	Second	R.O.P. (F.R.)	13 hours 45 minutes	0 hours 55 minutes	0 hours 10 minutes
57	24	Third	R.O.P. (F.R.)	20 hours 15 minutes	0 hours 20 minutes	0 hours 20 minutes
58	20	First	L.O.P. (F.R.)	34 hours 0 minutes	1 hour 5 minutes	0 hours 30 minutes
59	27	Fourth	R.O.P. (Pers.)	4 hours 20 minutes	0 hours 20 minutes	0 hours 25 minutes
60	18	First	R.O.P. (F.R.)	22 hours 0 minutes	2 hours 5 minutes	0 hours 10 minutes
61	28	Second	R.O.P. (Pers.)	23 hours 15 minutes	2 hours 15 minutes	0 hours 15 minutes
62	25	First	R.O.P. (F.R.)	7 hours 10 minutes	4 hours 25 minutes	0 hours 30 minutes
63	29	First	R.O.P. (F.R.)	54 hours 0 minutes	1 hour 20 minutes	0 hours 30 minutes
64	31	First	R.O.P. (F.R.)	9 hours 0 minutes	1 hour 15 minutes	0 hours 25 minutes
65	30	Sixth	L.O.P. (Pers.)	4 hours 5 minutes	1 hour 10 minutes	0 hours 20 minutes
66	29	Second	R.O.P. (F.R.)	10 hours 0 minutes	0 hours 50 minutes	0 hours 20 minutes
67	36	Second	L.O.P. (Pers.)	3 hours 30 minutes	2 hours 5 minutes	0 hours 20 minutes
68	1[1]	First	L.O.P. (F.R.)	41 hours 45 minutes	1 hour 10 minutes	0 hours 15 minutes
69	19	First	R.O.P. (F.R.)	36 hours 30 minutes	4 hours 30 minutes	0 hours 10 minutes
70	44	Third	R.O.P. (Pers.)	25 hours 30 minutes	1 hour 25 minutes	0 hours 10 minutes
71	28	Third	L.O.P. (Pers.)	14 hours 0 minutes	0 hours 40 minutes	0 hours 5 minutes
72	33	Seventh	R.O.P. (Pers.)	26 hours 15 minutes	6 hours 45 minutes	0 hours 25 minutes
73	20	First	L.O.P. (F.R.)	19 hours 30 minutes	2 hours 30 minutes	0 hours 20 minutes
74	23	First	R.O.P. (F.R.)	Indefinite	Indefinite	0 hours 30 minutes
75	39	Third	L.O.P. (Pers.)	20 hours 30 minutes	1 hour 15 minutes	0 hours 10 minutes
76	19	First	L.O.P. (Pers.)	28 hours 40 minutes	3 hours 30 minutes	0 hours 35 minutes
77	22	First	L.O.P. (F.R.)	17 hours 0 minutes	1 hour 50 minutes	0 hours 20 minutes
78	21	First	R.O.P. (F.R.)	33 hours 30 minutes	1 hour 25 minutes	0 hours 20 minutes
79	39	Twelfth	L.O.P. (Pers.)	Indefinite	Indefinite	0 hours 25 minutes
80	42	Thirteenth	R.O.P. (F.R.)	4 hours 0 minutes	1 hour 50 minutes	0 hours 15 minutes
81	38	Second	R.O.P. (F.R.)	25 hours 30 minutes	0 hours 35 minutes	0 hours 25 minutes
82	18	First	R.O.P. (F.R.)	22 hours 0 minutes	0 hours 45 minutes	0 hours 30 minutes
83	26	Fourth	R.O.P. (F.R.)	12 hours 45 minutes	0 hours 10 minutes	0 hours 10 minutes
84	22	Third	L.O.P. (Pers.)	26 hours 15 minutes	0 hours 45 minutes	1 hour 0 minutes
85	17	Second	R.O.P. (Pers.)	9 hours 30 minutes	1 hour 45 minutes	0 hours 15 minutes
86	26	Fifth	R.O.P. (Pers.)	5 hours 30 minutes	0 hours 30 minutes	0 hours 15 minutes
87	19	First	L.O.P. (F.R.)	11 hours 0 minutes	3 hours 30 minutes	0 hours 30 minutes
88	26	Second	R.O.P. (Pers.)	20 hours 45 minutes	0 hours 35 minutes	0 hours 15 minutes
89	29	Fourth	R.O.P. (Pers.)	10 hours 30 minutes	0 hours 45 minutes	0 hours 20 minutes
90	16	First	R.O.P. (Pers.)	14 hours 40 minutes	1 hour 30 minutes	0 hours 30 minutes
91	20	Third	L.O.P. (Pers.)	1 hour 30 minutes	7 hours 10 minutes	0 hours 30 minutes
92	34	Third	R.O.P. (F.R.)	2 hours 30 minutes	0 hours 25 minutes	0 hours 30 minutes
93	22	Second	L.O.P. (Pers.)	11 hours 25 minutes	0 hours 35 minutes	0 hours 10 minutes
94	21	First	R.O.P. (Pers.)	75 hours 30 minutes	4 hours 50 minutes	0 hours 20 minutes
95	18	First	R.O.P. (Pers.)	39 hours 45 minutes	5 hours 0 minutes	0 hours 15 minutes
96	37	Third	R.O.P. (F.R.)	4 hours 50 minutes	0 hours 20 minutes	0 hours 20 minutes
97	19	Second	R.O.P. (Pers.)	7 hours 0 minutes	0 hours 25 minutes	0 hours 15 minutes
98	27	Third	L.O.P. (F.R.)	5 hours 20 minutes	0 hours 40 minutes	0 hours 10 minutes
99	30	Third	L.O.P. (F.R.)	1 hour 35 minutes	0 hours 35 minutes	0 hours 25 minutes
100	21	Fourth	L.O.A. (Pers.) R.O.P. (Pers.)	Indefinite	Indefinite	0 hours 15 minutes

are used, the position of the child's head must be accurately determined before the forceps are applied. I have had no experience of this method.

Persistent Occipito-Posterior Delivery.—Persistent occipito-posterior delivery may occur naturally and in thirty-nine cases of the present series birth occurred in this way without any help being needed. If labour is progressing favourably, it can be left alone. There is certainly more risk of extensive laceration of the perineum, though I have delivered several women in this way with no laceration at all. When there is sufficient room for the hand in the pelvis, one may have to deliver the woman of a persistent occipito-posterior fœtus with forceps. Pull it out slowly and carefully, making the occiput sweep over the perineum by first pulling the occiput down and back until the perineum is stretched over it and then pulling more forwards and eventually directly forwards. More force than usual has to be applied and there is a tendency for the head to be born suddenly and thus cause extensive perineal lacerations. To avoid this keep a most careful watch on the head, with the patient well anæsthetized, steadying the forceps all the time to allow the head to be born slowly. In these cases in particular the help of a colleague to administer the anæsthetic should always be obtained. In a persistent occipito-posterior fœtus which cannot be manually rotated, an attempt should be made to convert the presentation into a mento-anterior and to allow birth to take place as such. If this cannot be done, delivery should be carried out with the forceps as described.

Craniotomy.—Craniotomy is indicated when delivery by other means has failed and the child is dead and the disproportion is such that the soft tissues will be extensively damaged.

Conclusion.

In summing up the management of an occipito-posterior position the first thing to do is to see that the uterus is in its normal position, that is to

OCCIPITO-POSTERIOR PRESENTATIONS—(*Continued*).

Child.	Result.	Injury to Perineum.	Length of Stay in Hospital.	Treatment.	Remarks.
F. 6¾ lb.	Alive	Nil	13 days		
M. 8½ lb.	Alive	Nil	10 days	Delivered P.O.P.	
F. 6½ lb.	Alive	Rupt. 1st	58 days	Both man. rotat. and forceps	Pyelitis of pregnancy, P.P.H.
F. 6½ lb.					
F. 7½ lb.	Alive	Nil	14 days		
M. 5½ lb.	Still-born	Nil	10 days	Delivered P.O.P.	A.P. and P.P.H., baby premature $^{8}/_{12}$
M. 7 lb.	Alive	Nil	11 days	Delivered P.O.P.	
M. 7¼ lb.	Alive	Rupt. 2nd	12 days	Delivered P.O.P.	
M. 9 lb.	Alive	Nil	10 days	Delivered P.O.P.	
F. 9 lb.	Alive	Nil	11 days	Delivered P.O.P.	
M. 7 lb.	Alive	Nil	13 days P.P.		
M. 9½ lb.	Alive	Nil	10 days		
F. 4¾ lb.	Alive	Nil	10 days	Delivered P.O.P.	
M. 8 lb.	Alive	Nil	21 days		Subinvolution
M. 7½ lb.	Alive	Nil	10 days		
M. 6¾ lb.	Alive	Nil	11 days		
M. 7 lb.	Alive	Nil	12 days	De Ribes's bag, delivered P.O.P.	*Placenta prævia*
M. 7¾ lb.	Alive	Rupt. 2nd	18 days P.P.	Instrumental delivery	Albuminuria, U.D. 8th day
F. 8½ lb.	Died 4th day	Nil	13 days	Instrumental delivery, P.O.P.	Baby *spina bifida*
F. 6½ lb.	Alive	Rupt. 1st	23 days		Puerperium normal
M. 7½ lb.	Alive	Nil	3½ months		Chr. nephritis, subinv., 21 days P.P.
F. 8¾ lb.	Alive	Nil	18 days		Subinvolution
M. 6 lb.	Alive	Nil	10 days	Delivered P.O.P.	
M. 7¾ lb.	Alive	Nil	10 days		
F. 8¾ lb.	Alive	Nil	14 days	Delivered P.O.P.	
M. 8 lb.	Alive	Nil	16 days		U.D. on 8th day
M. 8 lb.	Alive	Nil	10 days	Instrumental delivery	
M. 4½ lb.	Still-born (macer.)	Nil	10 days	Delivered P.O.P.	Baby $^{8}/_{12}$ premature
F. 2 lb.	Still-born (macer.)	Nil	15 days	Delivered P.O.P.	Subinv., U.D. 10th day, baby $^{7}/_{12}$ prem.
M. 9½ lb.	Still-born	Nil	12 days	Manual rotation, instrumental	
M. 7¾ lb.	Alive	Nil	10 days	Instrumental delivery	
M. 7 lb.	Alive	Nil	12 days	Instrumental delivery	
F. 6½ lb.	Alive	Nil	12 days	Delivered P.O.P.	
M. 8 lb.	Alive	Rupt. 1st	15 days	Delivered P.O.P.	
M. 9½ lb.	Alive	Nil	11 days		
F. 7½ lb.	Alive	Nil	10 days		
M. — lb.	Still-born	Nil	Dd. 5th day	Attempted instru. craniotomy	Obstructed brim; extraperiton. hæm.
M. 10 lb.	Alive	Nil	12 days		
F. 8 lb.	Alive	Nil	15 days	Instrumental	
M. 6½ lb.	Alive	Nil	10 days		
F. 6 lb.	Alive	Nil	11 days		A.P.H. (slight)
M. 5¾ lb.	Died, 45 minutes	Nil	10 days	Delivered P.O.P.	Wassermann, no reaction
F. 7 lb.	Alive	Nil	10 days	Delivered P.O.P.	
M. 2½ lb.	Died, 30 minutes[1]	Nil	10 days	Delivered P.O.P.	A.P.H.
F. 7½ lb.	Alive	Nil	10 days		
F. 9¾ lb.	Alive	Rupt. 1st	15 days	Delivered P.O.P.	P.P.H. (slight).
M. 8½ lb.	Alive	Rupt. 1st	11 days	Delivered P.O.P.	
M. 8½ lb.	Alive	Rupt. 1st	12 days	Delivered P.O.P.	U.D. on 7th day
M. 8½ lb.	Alive	Nil	14 days	Delivered P.O.P.	U.D. on 9th day
F. 6½ lb.	Alive	Nil	10 days		
F. 7¾ lb.	Alive	Rupt. 1st	11 days	Delivered P.O.P.	
M. 10½ lb.	Still-born	Rupt. 1st	33 days	Manual rotation, instrumental	Prolapse of cord, 3rd stage hæm.
M. 7½ lb.	Alive	Nil	10 days	Delivered P.O.P.	
M. 10 lb.	Alive	Rupt. 1st	10 days		
F. 7½ lb.	Alive	Nil	16 days	Delivered P.O.P.	U.D. on 6th day
M. 8½ lb.	Alive	Nil	14 days		
M. 7 lb.	Alive	Nil	10 days		
6¼ lb.	Alive	Nil	12 days	2nd of twins, delivered P.O.P.	P.P.H.

[1] Premature 6½ months.

correct any obliquity and then to restore the flexion of the child. Then try to convert the position into an anterior one which may be aided by placing the patient in the Sims position or the Trendelenburg or the knee chest position. If the head is arrested at the brim, Walcher's position is useful. Before attempting manual rotation see that the uterus is in the middle line and Sims's position is an aid to success.

The most important point is the antenatal examination about the thirty-sixth or thirty-seventh week and the correction by external manipulation or pad and binder. When interference is necessary, the safest method is by manual rotation and delivery by forceps.

Rotation by forceps with a pelvic curve is attended by grave risks to both mother and child and should not be attempted. It is admitted even by those writers who advocate it, that rotation by straight forceps or the Kielland forceps carries more risk and is attended by a higher maternal and fœtal mortality and morbidity than manual rotation. It is an operation which should not be attempted until considerable skill in the use of forceps has been attained.

Persistent occipito-posterior positions do not require operative treatment unless some other indication is present.

Acknowledgment.

I would like to express my thanks to Dr. Chesterman for the trouble he took in collecting this series of cases from the records of the Women's Hospital, Crown Street.

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BREECH DELIVERY.

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A GREAT deal has been written lately on maternal and fœtal mortality. From the latter the reader realizes that the present results of breech delivery are unsatisfactory. Prophylactic version alone has not solved the difficulty, although it is a most important factor.

Breech Cases in Outdoor Hospital Practice.

The following figures are taken from the district department of a public institution in charge of a capable sister of long experience. They are consecutive cases extending over a period of ten years.

Total deliveries other than breech presentations numbered 3,531. *Multiparæ* among these numbered 2,891; *primiparæ* numbered 640. There were 34 *multiparæ* with still-born infants. There were 14 *multiparæ* with macerated infants. There were 9 *primiparæ* with still-born infants. There were 6 *primiparæ* with macerated infants.

The total number of breech presentations was 107. In these cases there were ninety-three living children, eight still-born and six macerated fœtuses. There were eighty-six *multiparæ* with seven still-born and five macerated fœtuses. There were twenty-one *primiparæ* with one still-born and one macerated fœtus.

Out of the 107 breech presentations eight babies were born before the nurses arrived, six of the mothers were *multiparæ* and two were *primiparæ*. Of the children of the six *multiparæ* one was still-born; of the children of the two *primiparæ* one was still-born, being born as far as the head on the arrival of the nurse.

There were twins in twenty cases. Nineteen of those mothers were *multiparæ* and one was a *primipara*.

There were ninety-six full time and eleven premature breech presentations. In the premature breech cases seven mothers were *multiparæ* and four were *primiparæ*. Of the children of the *multiparæ* there were two living, four still-born and one macerated fœtus. Of the children of the *primiparæ* there were two living, one still-born and one macerated fœtus.

Seven *multiparæ* had still-born children, four were premature. In the first of the three full-time cases twins were born, the first was a breech and delivery was carried out by a junior resident called in. In the second instance there was no ascertainable cause of death, the patient had three children. In the third case the child was a monster, hydramnios was present and the patient had nine children. Of the premature still-born children one was born at six and a half months, another was born at seven and a half months; in both cases birth occurred before the arrival of the nurses. In the third and fourth cases, no cause of death was recorded.

One *primipara* had a still-born child. The child was born as far as the head on the arrival of the nurses and was premature.

In four cases delivery was carried out by a resident who was called in. The first has been referred to in the group of *multiparæ* who had still-born children. In the second case the full-time fœtus was macerated. In the third case a living child was born; the mother had six children. In the fourth case twins were born; the first was a vertex, the second a transverse presentation. Version was done and both children lived.

Conclusions.

The nurses had a death rate of 4·39% including premature infants but excluding infants born before the arrival of the nurses and macerated infants or a death rate of 1·13% if the premature infants are excluded.

These nurses have had their labour ward training indoors and on district act under a capable and experienced sister. It may thus be presumed that the proper management of breech delivery is to a certain extent carried out. Their results are good.

From this it may be concluded that when the accoucheur thoroughly understands and is experienced in the management of breech delivery still-births seldom occur.

Breech Cases in Indoor Hospital Practice.

Consecutive breech deliveries from the indoor department of a public institution extending over a period of six and a half years are shown in Table I.

Two of the patients delivered by nurses of full-time still-born children presenting naturally by the breech had albuminuria and one had eclampsia.

TABLE I.—SHOWING BREECH CASES IN INDOOR DEPARTMENT.

Type of Case.	Living.	Still-born.	Macerated.	Total.
Total breech deliveries	348	144	39	531
Total natural breech deliveries	296	35	25	356
Breeches resulting from interference	52	109	14	175
Premature natural breeches	48	9	13	70
Natural breeches; delivery by nurses	224	17	24	265
Premature natural breeches; delivery by nurses	45	6	13	64
Natural breeches; delivery by residents	72	18	1	91
Premature natural breeches; delivery by residents	3	3	0	6

TABLE II.

Condition and Treatment.	Number of Children Living.	Number of Children Still-born.	Number of Fœtuses Macerated.
Placenta prævia, version done	13	49	4
Placenta prævia, breech presenting leg brought down	1	4	2
Placenta prævia and prolapsed cord, version done	..	1	..
Placenta prævia and prolapsed cord, breech presenting, leg brought down	..	2	..
Placenta prævia and transverse presentation, version done	..	2	1
Prolapsed cord, version done	..	6	..
Prolapsed cord and breech presenting	4	13	2
Transverse presentation, version done	18	10	3
Transverse presentation, prolapsed cord and version done	1	3	..
Twins, the second presenting transversely, external version done	1	..	..
Induction, bag, cord prolapsed and version	1	..	..
Induction, bag, breech presenting	1	..	..
Induction, bag, toxæmia, breech presenting	1	..	..
Induction, bag, eclampsia, breech presenting	..	1	..
Induction, bougies, bag and version done	..	..	1
Induction, bougies, albuminuria, cord prolapsed	1	..	..
Induction, albuminuria, breech presenting	..	..	1
Accidental hæmorrhage, version done	1	1	..
Accidental hæmorrhage, breech presenting	1	1	..
Albuminuria, accidental hæmorrhage, bag used and version done	..	1	..
Brow, version done	..	1	..
Face, version done	..	1	..
Embryotomy	..	1	..
Contracted pelvis, embryotomy	..	1	..
Contracted pelvis, version done	1	..	..
Contracted pelvis, forceps failed and version done	..	1	..
Contracted pelvis, breech presenting	..	1	..
Impacted breech	1	3	..
Cæsarean section, breech presenting	1	..	..
Pubiotomy, breech presenting	1	..	..
Forceps on the after coming head	1	..	..
Rigid *os*, breech presenting	..	1	..
Hydrocephalus and craniotomy	..	5	..
Hydramnios, breech presenting	2	..	..
Mother had ventrosuspension and repair of cervix with slow labour	1	..	..

One of the patients delivered by nurses of premature still-born children presenting naturally by the breech had albuminuria.

One of the patients delivered by residents of still-born children presenting by the breech had albuminuria.

In Table II. are set out the various cases in which interference was necessary in a breech presentation or in which interference was of such a nature that a breech presentation was produced.

Conclusions.

The nurses had a fœtal death rate of 5·48% including prematures. The nurses had a fœtal death rate of 3·44% excluding prematures. The residents had a fœtal death rate of 19·10% including prematures. The residents had a fœtal death rate of 16·27% excluding prematures.

The difference in these results may be due to the fact that the residents may deliver the more difficult cases

As regards natural breeches a normal breech presentation should not cause still-birth if the accoucheur is skilled in breech delivery. A breech presentation with extended legs can scarcely be regarded as a normal breech, as it is so often necessary to aid delivery by bringing down the legs or by traction on the breech.

As regard breeches with or after interference, any interference makes the prognosis very bad for the infant, but it has so often to be done, firstly in the interests of the mother, secondly to make delivery possible and thirdly in the interests of the infant.

The ideal time for interference as regards the prognosis for the child is when the *os* is fully dilated and delivery follows immediately. When the interference takes place before full dilatation of the *os*, but when the *os* is soft and dilates easily and rapidly and allows quick birth of the child, the prognosis is still fair, although not as good as when full dilatation is present. When interference has to be undertaken during the first stage (and unfortunately there are times when this is necessary) and delivery occurs some time later, the prognosis for the child is distinctly bad. The longer the delay in delivery after interference, the worse the prognosis.

In the treatment of *placenta prævia* version is very safe for the mother, but rarely for the child. Some recommend external version and then to bring down a leg, but in the foregoing cases no improvement is shown in the result to the infant when the breech had already presented. It is all in the interests of the mother.

Good results were not obtained when version was performed on account of a prolapsed cord.

Reviews.

PUERPERAL INFECTION.

WITHIN the past year two valuable contributions on the causation and prevention of puerperal sepsis have been published in Australia and Great Britain. Both were the results of an essay competition and the book under review, "Puerperal Septicæmia," by Dr. George Geddes, was awarded the Nicholls Prize of the Royal Society of Medicine in 1924.[1] The work is an attempt to prove that while there are many factors responsible for puerperal sepsis, the main one is septic wounds caused by industrial accidents. Medical men dressing septic wounds as part of their routine work often unwittingly are the means of conveying these germs to the generative tract of women

[1] "Puerperal Septicæmia: Its Causation, Symptoms, Prevention and Treatment," by George Geddes, M.D., C.M. (Aber.); 1926. Bristol: John Wright and Sons, Limited. Demy 8vo., pp. 206. Price: 12s. 6d. net.

during labour. After reviewing the bacteriology of sepsis the author developes his thesis that the incidence of puerperal sepsis is determined by the accident rate of the district in which the patient lives. He has subjected Lancashire to a very intensive statistical survey dividing the county into groups according to the industries. From this he maintains that a high mortality rate is associated generally either with a large percentage of unnotified cases or with a high accident rate. Where the midwives attended the majority of patients the percentage of cases unnotified was low, but in residential areas where practically all patients have a doctor in attendance, the percentage was much higher. Some criticism is forestalled by the fact that in Lancashire at least any case in which a midwife has to call in a doctor is still credited the nurse in the official records. As further support for his "accident" theory he quotes the miners' strikes of 1912 and 1921 when for the period of the strike there was a diminution in the number of cases notified in the mining districts. He concludes that atmospheric conditions have no direct bearing on the causation of sepsis nor have the social position and hygienic surroundings of the patients.

Like many others obsessed with an idea the author cannot see any virtue in the conclusions drawn by other investigators who do not agree with him. Antenatal supervision for example is given very lukewarm support. "If considered necessary the urine should be examined" sounds strange coming from a man who obviously is trying to tackle the problem from all angles. His apparent attitude is that nothing before labour matters very much. The climax is reached, however, in the discussion on the sterilization of the hands and the use of gloves. To our utter astonishment the author definitely states that if gloves be worn there need not be the same care bestowed upon the preparation of the hands. In the treatment of the condition he prefers the use of a blunt curette and douches to the more modern methods of non-interference. Finally he maintains that all labours should take place in properly equipped private or public hospitals under the charge of nurses possessing a double certificate. Normal cases may have a doctor or not according to the desire of the patient, but the presence of a doctor would be essential for any abnormality.

Hospitalization of all patients and the need for all obstetric nurses to hold a certificate of general training are steps in the right direction. If the theory put forward by Dr. Geddes be correct, it would be more logical to go a step further and to compel all general practitioners in industrial areas at least to give up delivering patients and hand them over to certain men set aside for this purpose.

This is a book to be recommended to the earnest consideration of those interested in obstetrics. The present world wide endeavours to ascertain the causation of puerperal mortality will doubtless prove or disprove the views so ably presented by Dr. Geddes.

A GREAT TEXTBOOK ON PHYSIOLOGY.

THE fourth edition of the "Principles of General Physiology,"[1] the greatest book of its kind, remains as a tribute to the scientific memory of the late William Maddock Bayliss and as a witness of the affection which he inspired in all who had the good fortune to come within the magnetic field of kindness which surrounded him. This edition has been revised by a group of the author's friends, partly in order to insure that this book which had been such a considerable factor in determining the present state and existing tendencies of physiology, should continue to be available for the service of science and partly as a sincere measure of regard and sympathy for William Bayliss laid aside on a bed of sickness. To the sorrow of his friends William Bayliss died on August 27, 1924, a little while after the last proofs of this book had been corrected.

The committee of biologists, chemists and physiologists who undertook the preparation of this edition has been careful to avoid any considerable interference with the text of the third edition. It has not desired to modify the expressions of the personal opinions and outlook of the original author. It has attempted to insert a few corrections of fact made necessary by new investigations, to refer shortly and with little comment to recent important papers and to bring the bibliography up to date. The twenty-four chapters of the third edition have been apportioned between the members of the committee who have singly or in pairs undertaken the work of revision. It is noteworthy that twenty-four editors have been employed on this task.

The frontispiece to the volume is an excellent portrait of William Bayliss which was taken in the laboratory at University College London four years ago. It is a speaking likeness of the research worker seated by a kymograph with his pipe in his hand and wearing his work-a-day coat. The kindly expression of the face reminds all physiologists of his personal qualities of simplicity, generosity and enthusiasm which contributed so much to the brotherliness of the Physiological Society of Great Britain.

It is indeed a pleasure to read again the early chapters of this book in which the relations of the fundamental laws of energetics and of surface action to biological function are expounded and illustrated; in which there are set forth the properties of matter in the colloid state and the characteristics of water; in which the effects of permeability at a surface separating two fluids which do not mix, are discussed, and in which the laws governing the behaviour of electrolytes are illustrated in the realm of biophysics. The wide range of knowledge requisite for the adequate explanation of physiological phenomena is apparent from a perusal of these chapters. As Bayliss so truly remarks, "at one moment we are concerned with the movements of protoplasm in a cell or the composition of the primeval ocean and at the next with the work done in compressing a gas, the chemical properties of amino-acids or the constitution of dyes."

The work can be confidently recommended to all those desirous of understanding the physical and physico-chemical laws utilized by physiologists at the present day in the explanation of the phenomena of life.

[1] "Principles of General Physiology," by Sir William Maddock Bayliss, M.A., D.Sc., F.R.S.; Fourth Edition: 1924. London: Longmans, Green and Company. Royal 8vo., pp. 882, with 261 illustrations. Price: 28s. net.

ELECTRO-THERAPY.

G. BETTON MASSEY'S "Practical Electro-Therapeutics and Diathermy" aims to furnish students, surgeons and general practitioners with the basis for a practical understanding of the application of electric power in the treatment of their patients.[1]

It is written by one of the oldest exponents of electro-therapeutics in the United States and is in our opinion successful, accomplishing its aim. It is free from vagueness in statement and is also marked by a sane conservatism. The methods of treatment dealt with are electrolysis, ionization, wave currents, diathermy, high frequency and static electricity.

Perhaps a little too much space is given to the method of combined ionization and electro-coagulation of tumours. This is, however, natural as the method has been developed by the author.

Every practitioner will find something to his interest in this volume. A rapid development of physio-therapy is taking place and electricity occupies a large part of the field. These methods are direct, personal and under control. They should not be allowed to be conducted by others than medically qualified persons. Relegating them to the masseur is dangerous for two reasons. First they require (much more than drug therapy) personal adaptation to the patient and, secondly, the use of these methods by unqualified persons tends to form charlatans. Moreover their uncritical and uninstructed use brings the methods themselves into disrepute.

We would note as of special interest the application of electricity to gynæcology, good results being obtained in many functional and inflammatory disturbances.

[1] "Practical Electro-Therapeutics and Diathermy," by G. Betton Massey, M.D.; 1924. New York: The Macmillan Company; Demy 8vo., pp. 413, with 157 illustrations. Price: 35s. net.

The Medical Journal of Australia

SATURDAY, JUNE 26, 1926.

Occipito-Posterior and Breech Presentations.

THE value of a certain method of treatment may be ascertained when its results are compared with those obtained from a different method in a large number of cases. The comparison is justified when the number is sufficiently large to make it probable that other factors may be disregarded. Similarly the results obtained in treatment according to a given routine may be analysed in an effort to discover which of the accompanying factors capable of modification or elimination may be attacked so that still better results may be obtained. From this point of view the articles by Dr. A. J. Gibson and Dr. H. A. Ridler in this issue will be read with interest. Both papers represent a large amount of time spent in the collection of data and of care and patience in the collation of the findings.

The occurrence of abnormality in labour is inevitable. Indeed if the definition of normal labour proposed by Dr. Mary De Garis, that it is a labour unaccompanied by pain, be accepted, abnormality of labour would be well nigh universal. Of all the abnormalities commonly encountered in obstetric practice none calls for more understanding and patience than occipito-posterior and breech presentations. A *placenta prævia*, for example, will cause anxiety and will impel constant attention. An occipito-posterior or a breech presentation, on the other hand, particularly the former is frequently a matter of frank irritation both to a man who has too much work to do, and to one who is so infected with laziness that he has little inclination to give sufficient time and trouble to what he has on hand.

The most important point in Dr. Gibson's paper is his hypothesis that an anterior implantation of the placenta is a primary factor in causing occipito-posterior presentations. It is remarkable that none of the speakers who discussed Dr. Gibson's paper, with the single exception of Dr. Brown Craig, made any reference to this view. It is obvious that if exact knowledge can be obtained of the factors underlying this abnormality, then and then only can some means be devised of obviating its occurrence. It should not be a matter of great difficulty to determine whether retroflexion or retroversion of the non-gravid uterus is, as Dr. Gibson suggests, the ultimate determining cause. Doubtless Dr. Gibson will follow up this line of inquiry and possibly others will be induced to do the same.

Two lessons may be learned from the two papers under discussion. These are the importance of antenatal supervision and a proper recognition of the indications for interference. The former has been emphasized in this journal time and time again. Dr. Gibson has demonstrated its bearing on occipito-posterior presentations. Under ideal conditions no woman should be delivered of a fœtus which is in the permanent occipito-posterior position unless the medical attendant not only knows the nature of the position, but has used every justifiable endeavour if necessary to convert it to one more favourable. Unfortunately ideal conditions do not exist and patients are still brought to hospital and still send for a medical practitioner for the first time when labour has already started. That women are spontaneously seeking advice much earlier than formerly is evident from hospital statistics. That they can be persuaded to do so in increasing numbers is equally true. It is probable that the general practitioner has greater opportunity of exerting his influence in this direction than has his *confrère* on the outdoor staff of a teaching hospital. Although it is fashionable to say that the days of the family doctor are vanishing or have vanished, many practitioners still enjoy the wholehearted confidence of their patients. Nor is the art of abdominal palpation difficult to acquire. The general practitioner can teach himself to become adept in its use in exactly the same way as the honorary attendant at a hospital has done.

In regard to the indications for interference Dr. Ridler has pointed the way. He has shown conclusively that the results obtained by nurses acting without resident medical officers are superior to

those obtained by residents. Although Dr. Ridler has been kind to the resident medical officers and has suggested that they have been called in to the more difficult cases, careful examination and comparison of the outdoor and indoor figures will show that his kindness is not justified. If it be taken that the resident medical officers were called in only to the difficult cases in the district work and if the difficult cases in indoor work are assumed to be in the same proportion, the mortality in their series is higher than that of the nurses. Evidently residents rush in where nurses fear to tread. A new graduate not unnaturally wants to do something; he has to justify his existence, at any rate in his own eyes. The temptation to interfere unnecessarily in breech cases is very great and in these probably more than in any other Nature may be left to do her work unaided.

Both Dr. Gibson and Dr. Ridler have earned the appreciation and thanks of the readers of THE MEDICAL JOURNAL OF AUSTRALIA.

Current Comment.

ABDERHALDEN'S CANCER TEST.

NOTWITHSTANDING the ingenious work of Gye and Barnard and the continued investigations of biologists, parasitologists and clinicians in every country, the cancer problem is still unsolved. The study is peculiarly complex and difficult of approach because physiological data do not throw any light on the underlying process which leads to a disordered hyperplasia of epithelial cells. It is known that certain chemical insults disturb the physiological activity of epithelial cells and that these cells take on a limitless overgrowth when they cease to perform their proper functions. It is obvious that all the facts concerning this change have not been revealed. It is not even known whether there is a special chemico-physical mechanism governing the normal activity of epithelial cells or whether this quality is inherent and continues unless and until the chemical and physical structure of the cells is altered by some extraneous agent. The study of normal and of cancer cells up to the present time has not disclosed sufficient information to indicate any essential difference in their chemical or physical properties. On the other hand some indirect evidence has been sought that may eventually prove to be of importance in the unravelling of the mystery. Some chemical peculiarities of the serum of persons suffering from cancer have been described in the past. In addition Abderhalden pointed out some years ago that the serum of cancer patients contained a biological constituent which reacted specifically with cancer cells. He endeavoured to utilize this find for the diagnosis of cancer. A substratum of the serum was prepared with meticulous care and this substratum was brought into contact with normal and with cancerous tissue. The dissociation of the cells by the serum was measured by the amount of non-colloid nitrogen. Various methods were devised, all of which were complicated and demanded much skill in manipulation and the exercise of extreme care. Abderhalden's first method is the determination of the nitrogen content after the removal of the protein. Lüttge von Mertz suggested the application of the alcohol-ninhydrin test, Hirsch applied the inferometric method, while Abderhalden and his assistants have also used dialysis, refractrometric methods, nephelometric methods and the like, as well as the determination of the amino acid content. A considerable amount of work has been carried out in the control of Abderhalden's test, but it has not been accepted by clinicians on account of alleged irregularities of the results. A careful and critical examination of many of these control investigations reveals that those carrying out the test have not mastered the difficult technique. In these circumstances it would seem that the test is unlikely to be used to a large extent in private practice, although it may be of value in hospitals where trained biochemists are available.

Dr. K. Volkmann, working at the Women's Clinic at the University of Jena, maintains that there is overwhelming evidence of the specificity of the reaction.[1] He holds the opinion that the test is of value for the purpose of confirming or augmenting the clinical findings. Much work has still to be done to improve the technique in order that the manipulations may be simplified and the failures reduced. He deals in some detail with the commoner errors in technique and indicates how they may be avoided. It is unnecessary to explain in this place the manner in which the several tests should be carried out. The methods have been published many times in various journals. For the present purpose we wish to call attention to Dr. Volkmann's experience of the test. He has applied Abderhalden's residual nitrogen method, the alcohol-ninhydrin method and the inferometric estimation to the serum of eighty-one patients suffering from carcinoma of the cervix, of the body of the uterus, of the ovaries and of the vagina, recurrent carcinoma, a malignant dermoid and a Krukenberg tumour. In some instances one or two methods were applied, owing to the lack of sufficient time. In the majority he was able to compare all three methods. His results are instructive. An increase in the residual nitrogen was determined with 92% of the samples of serum, while the alcohol ninhydrin test yielded evidence of cancer in 90% and the inferometric method did the same in 95%. A reaction was obtained with many of the serum samples only with the same form of malignant growth as that from which the patient was suffering. Thus

[1] *Deutsche Medizinische Wochenschrift*, April 16, 1926.

the serum of a patient with carcinoma of the vaginal portion of the cervix yielded inferometric values of 13·86% with serum and cervical carcinoma, 11·20% with serum and uterine carcinoma, 5·94% with serum and carcinoma of the stomach, 0·66% with serum and myoma and 7·26% with serum and normal cervix.

The importance of this work, in our opinion, does not reside in the possibility of a confirmation of diagnosis. It appears to establish the presence of an antigen-antibody reaction specific to carcinomata. It may even be that the specificity holds good for each class of affected epithelial cell. In connexion with this it is necessary to recall the work of Lumsden. Lumsden showed that an immunity reaction follows the damage and slow absorption of cancer cells within the host. Although the available information is very limited, there certainly appear to be some data on which future work may be based. The fact that Abderhalden's reaction seems to teach, is that the carcinoma cell is in a state of dissociation; the products of dissociation, whatever they may be, act as antigens and antibodies appear in the serum.

THE CALCIUM CONTENT OF THE BLOOD.

THE importance of calcium in the economy of the body has become more and more apparent within recent times. Many workers have realized that the calcium and phosphorus balance has a physiological significance both in health and in disease and that an understanding of the mechanism of the maintenance of this balance is essential for the proper elucidation of the pathogenesis of many pathological processes. In these circumstances all observations on variations from the normal calcium content of the blood should be noted. Under normal conditions the blood contains between nine and ten milligrammes of calcium in each hundred cubic centimetres of serum. A few biochemists have fixed the upper limit of the normal range at just over eleven milligrammes. For practical purposes it may be assumed that a disturbance of the calcium metabolism is present when the content is below nine milligrammes, while a rise from the average value may occur as a temporary adjustment beyond ten milligrammes. Hitherto little significance has been attached to the appearance of an increased amount of calcium. Dr. G. H. Percival and Dr. C. P. Stewart have estimated the calcium content of the serum of persons suffering from some skin lesions, from various arthritic and vascular affections, from nephritis, diabetes and certain diseases of the glands of internal secretion and from epilepsy.[1] They have also studied the effect of medication with calcium salts and with parathyreoid extracts. They claim that it is necessary in all investigations of this nature to fix the normal range by the methods employed, so that when the serum of persons with pathological conditions is examined, variations from this range may be tabulated as distinctly abnormal. In a series of estimations of the serum of normal individuals, the range lay between 9·4 and 9·9 milligrammes per hundred cubic centimetres. From a table of initial values it is seen that the calcium was lower than nine milligrammes in the serum of patients with chronic interstitial nephritis, with heart failure, with acute nephritis, with chronic parenchymatous nephritis, with *tetania parathyreopriva*, with *lupus erythematosus*, with Raynaud's disease, with purpura and with severe tuberculous meningitis. Some high values were observed, but these do not appear to be associated with any particular form of disease. The authors administered parathyreoid extract by mouth to some normal subjects and recorded a rise to beyond the upper normal limit which was maintained as long as the drug was given. When calcium chloride was added to the parathyreoid extract the effect at times was enhanced. In some individuals parathyreoid extract had no effect on the calcium content. Calcium chloride and parathyreoid extract were given to patients suffering from a variety of affections and the level of the calcium content of the serum was noted. In general there was a tendency for the calcium content to be increased from low values, although it often failed to reach a normal level. Some anomalous results were encountered. For example, in rheumatoid arthritis the calcium content rose after parathyreoid feeding, but after a relatively high level had been reached, it decreased in spite of the continued medication. Some of the serum calcium curves are so irregular that it becomes doubtful whether the parathyreoid or calcium administration could be held responsible for the variations. In nephritis calcium chloride administered by mouth seemed to raise the level of the calcium of the serum, but a lowering followed in one patient while the medication was being continued. In skin diseases the calcium content was raised by the medication as a rule, although the action is not quite dependable. In *tetania parathyreopriva* parathyreoid extract failed to produce a rise, but ultimately an increase in the amount of calcium in the serum was obtained by the administration of calcium chloride. Some patients with disturbances of the glands of internal secretion were given thyreoid gland. It was noted that thyreoid gland substance exerts no direct action on the calcium content of the serum, but at times it appears to influence the calcium metabolism as a result of its effect on the general metabolism. As the basal metabolic rate rises, the calcium content usually increases. The value was normal before treatment in all the patients. In diabetes the condition of ketosis was induced by dietary means. When this condition is present, the calcium content of the serum is found to be low. In considering the results of the medication, it becomes obvious that there is some unexplained mechanism at work. A diminished calcium metabolism can be raised under some conditions by parathyreoid extract or calcium salts, but the action is not a direct one. Further study may reveal the factors leading to the variations.

[1] *The Quarterly Journal of Medicine*, April, 1926.

British Medical Association News.

ANNUAL MEETING.

THE ANNUAL MEETING OF THE SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the Lister Hall, Hindmarsh Square, Adelaide, on May 28, 1926, DR. H. H. E. RUSSELL, the Vice-President, in the chair.

Annual Report of the Council.

DR. H. H. E. RUSSELL, in the absence of the President, DR. C. T. C. DE CRESPIGNY, presented the Annual Report of the Council.

Report of the Council for the Eleven Months ending May 31, 1926.

Membership.

The membership of the Branch now stands at 383, being a net increase of 33 for the past year. The names of five members had to be removed from the list on account of non-payment of their 1924 subscriptions. It is with regret that the deaths are recorded of Drs. O. Leitch, R. J. Stevenson and H. C. C. Rennie.

Meetings.

Eight ordinary meetings and five special general meetings were held during the year and the Council met on eleven occasions. One special meeting of the Council was also called. The Lodge and Ethical Committee has met six times. The monthly scientific meetings have been well attended and many subjects dealt with. The attendances at Council meetings were as follow: Dr. Scott 1, Dr. de Crespigny 9, Dr. Russell 9, Dr. Newland 8, Dr. Smeaton 7, Dr. Verco 9, Dr. Erichsen 10, Dr. Beare 10, Dr. Brownell 9, Dr. Poole 10, Dr. Le Messurier 11, Dr. Brummitt 9, Dr. Douglas 10.

Federal Committee.

DR. H. S. NEWLAND and DR. B. SMEATON continued to represent the Branch on the Federal Committee and both attended the meetings held in Melbourne and Sydney during the year.

Listerian Oration.

This year the Council invited PROFESSOR WOOD-JONES, of the Adelaide University, to deliver the Listerian Oration.

Post-Graduate Course.

This year the Council will again hold a Post-Graduate Course for three days during the University vacation and at the time of the Listerian Oration. The course was to be free of charge and open to any member of the British Medical Association.

Leave of Absence.

The Council granted leave of absence to your President, Dr. C. T. Ch. de Crespigny, and your Vice-President, Dr. H. H. E. Russell, is now performing his duties. In the absence of Dr. C. T. C. de Crespigny there will not be a presidential address this year.

Formation of Sections.

At a special general meeting of the Branch on April 22, permission was given to form sections for special branches of medical knowledge.

North Terrace Building.

A matter at present being considered by the Branch is the purchase of land on North Terrace, adjoining the Adelaide Electric Supply Company's new building and the erection thereon of a building to become the home of the Branch.

H. H. E. RUSSELL,
Vice-President.

Financial Statements.

DR. W. A. VERCO, the Honorary Treasurer, presented the Financial Statements for the year ended December 31, 1925. The Financial Statements are printed below.

Election of Office Bearers.

The following office bearers were elected for the ensuing year:

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED DECEMBER 31, 1925.

EXPENDITURE.	£	s.	d.
To British Medical Association, London—Subscription Account	423	18	9
„ THE MEDICAL JOURNAL OF AUSTRALIA—Journal Account	327	0	0
„ Hire of Lister Hall	23	2	0
„ General Expenses	7	1	0
„ Postages and Telegrams	30	8	9
„ Stationery and Printing	27	7	1
„ Duty Stamps and Telephone	9	16	8
„ Salary (Secretary)	150	0	0
„ Depreciation of Plant *et cetera*	11	10	5
„ Federal Delegates' Expenses	17	2	6
„ Legal Expenses	14	14	0
„ Federal Committee Capitation Grant	31	18	0
„ Cost of Lister Medal Presented	1	14	2
„ Audit Fees	4	4	0
„ General Fund Account—Transfer of Surplus for Year	308	3	11
	£1,388	1	3

INCOME.	£	s.	d.
By Subscriptions Received	1,249	11	0
„ Subscriptions Due and Unpaid	63	0	0
„ Interest and Dividend	71	0	0
„ Medical Certificate Books (Profit on Sales)	3	7	9
„ Exchange	1	2	6
	£1,388	1	3

GENERAL FUND ACCOUNT.

	£	s.	d.
To Gift to Parent Body, London	25	0	0
„ Transfer to Library Fund Account (172½ City Members' Subscriptions at 10s.)	86	5	0
„ Balance Carried Down	1,430	15	1
	£1,542	0	1

	£	s.	d.
By Balance Brought Down	1,233	16	2
„ Income and Expenditure Account (Transfer of Surplus for Year)	308	3	11
	£1,542	0	1

LIBRARY FUND ACCOUNT.

	£ s. d.		£ s. d.
To University Library Grant—		By Balance Brought Down	218 0 0
Amount Paid and Due	50 0 0	„ Savings Bank Interest	5 13 10
„ Balance Carried Down	259 18 10	„ Transfer from General Fund Account (being 172½ City Members' Subscriptions at 10s.)	86 5 0
	£309 18 10		£309 18 10

BALANCE SHEET AS AT DECEMBER 31, 1925.

LIABILITIES.	£ s. d.	ASSETS.	£ s. d.	£ s. d.
British Medical Association, London	7 13 0	Plant and Fittings	£115 4 7	
THE MEDICAL JOURNAL OF AUSTRALIA	1 0 0	Less 10% Depreciation written off	11 10 5	
Medical Defence Association	1 0 0			103 14 2
Medical Benevolent Association	2 0 0	Delineascope (Library Fund)		55 2 10
Sundry Creditors	78 18 6	Commonwealth Loan, 6% 1930 (Face Value £700), Cost		691 3 6
Library Fund Account	259 18 10	Commonwealth Loan, 5% 1948 (Face Value £400), Cost		403 12 0
Subscriptions Paid in Advance	6 18 0	Lister Medals and Dies on Hand		22 0 0
General Fund Account	1,430 15 1	Savings Bank (Library Fund Account)		218 11 0
		Subscriptions Owing		63 0 0
		Medical Certificate Books on Hand		9 19 10
		Cash in Hand		6 18 9
		National Bank of Australasia, Ltd., Amount at Credit		214 1 4
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C. W. L. MUECKE, F.I.C.A.

Adelaide, May 6, 1926.

W. A. VERCO, Honorary Treasurer.
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President: Dr. H. H. E. Russell.
Vice-President: Dr. R. H. Pulleine and Dr. F. J. Douglas.
Medical Secretary: Dr. F. N. Le Messurier.
Honorary Treasurer: Dr. W. A. Verco.
Members of Council: Dr. G. H. B. Black, Dr. Milo Sprod, Dr. A. K. Gault and Dr. Rupert Magarey.
Delegates to the Federal Committee: Dr. H. S. Newland and Dr. Bronte Smeaton.
Library Committee: Dr. F. H. Beare, Dr. A. A. Lendon, Dr. H. S. Newland, Dr. W. Ray, Dr. F. N. Le Messurier.

SCIENTIFIC.

A MEETING OF THE SECTION OF GYNÆCOLOGY AND OBSTETRICS OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the B.M.A. Building, 30-34, Elizabeth Street, Sydney, on December 16, 1925, DR. FOURNESS BARRINGTON, the Chairman, in the chair.

Occipito-Posterior Presentations.

DR. A. J. GIBSON read a paper entitled "Occipito-Posterior Presentations" (see page 719).

DR. R. I. FURBER, D.S.O., paid a high tribute to Dr. Gibson's paper for its thoroughness, excellence and lack of padding. He called attention to the very high proportion of persistent occipito-posterior presentations and attributed it to more accurate diagnosis and in not labelling presentations as occipito-posterior when the head was in the transverse diameter as so commonly occurred. He agreed with Dr. Gibson in the bulk of his conclusions, but absolutely disapproved of expectant treatment after labour had begun. As the figures for persistent occipito-posterior presentations varied from 15% to 50% in Dr. Gibson's investigation, it was surely a very real possibility. If the expectant teaching of waiting hopefully until the head was on the pelvic floor (it was even advised to pull it there) was followed, a common resultant picture was one of a protracted labour, early rupture of the membranes with little *liquor amnii* left, a strongly contracting uterus possibly moulded to the fœtus and definite head moulding of the occipito-posterior type. It became progressively more difficult, as labour went on, to twist the head and body into an anterior position or push the head out of the pelvis to effect this, until one came to a situation necessitating damage of varying degree to mother and child.

He strongly urged interference at the earliest suitable time, preferably as soon as the *os* was sufficiently dilated to grasp the head. When done at this stage the operation was almost invariably easy and it was done before posterior type moulding had developed to such an extent that the head could quickly develope the anterior type so necessary to eutocia.

DR. H. C. E. DONOVAN after thanking and congratulating the author of the paper on the amount of valuable and practical material therein and on the amount of labour involved in preparing the statistical portions of the paper, said that he was glad that Dr. Gibson had stressed the importance of thorough antenatal examination and care and in particular the value of correction by means of external manipulation and the use of pads, more especially the single pad as used at the Women's Hospital, Crown Street. He would suggest that the frequency of inertia as a complication of occipito-posterior cases was explained by the presenting part failing to engage completely and regularly and thus failing to give the normal stimulus to the cervical ganglia. In this way the polarity of the

uterus was upset and uterine contractions became irregular and ineffective. He considered that it was extremely important to emphasize the danger of any form of rotation by means of the forceps and thought that the section should unreservedly condemn that form of treatment.

DR. H. A. RIDLER said that in the diagnosis of difficult cases, if the operator was still uncertain of the position of the head after feeling an ear, the whole hand must be inserted and the occiput or face felt. As to the method of rotating occipito-posterior fœtuses the manual method was undoubtedly better than that with forceps. If the operator had an exceptionally big hand he might get a better result by rotation with forceps. The time to interfere in occipito-posterior positions could not be laid down, each had to be judged for itself, the time was not measured in hours and minutes, but by the condition of the mother and child.

DR. BROWN CRAIG said that he felt very interested in the theory put forward by Dr. Gibson that an anterior implantation of the placenta was one of the primary factors in causing the fœtus to lie in this position. Personally he had not been impressed during his work in the antenatal department of the Royal Hospital for Women with the fact that anterior implantation of the placenta was a common feature in these cases. On the contrary, it had been his experience that in most occipito-posterior positions one of the salient points of diagnosis was the clearness with which the limbs could be felt near the mid-line through the anterior wall of the uterus. He would pay particular attention to this point in future to observe its constancy.

Referring to Dr. Gibson's description of the prominence of the chin during palpation, he doubted whether this part of the face could be readily demonstrated by palpation, if any degree of flexion were present; after all, in the fœtus at term the lower jaw was not prominently developed and he thought it could not be readily palpated owing to its being tucked in against the sternum. He had always been in the habit of judging the degree of flexion by demonstrating the relative heights of the very prominent sinciput and the more pointed occiput.

Dr. Gibson had described Buist's method with some inaccuracy in that he placed the square pad behind the back and the rolled pad over the limbs. In *The British Medical Journal* of November 4, 1922, the method attributed to Buist was explained by the late J. W. Ballantyne and consisted of turning the fœtal body as far forward as might be by manipulation through the anterior abdominal wall and then placing a longitudinal rolled pad the size of a forearm along the fœtal back and in front of the anterior superior spine of the mother and a flat pad fifteen or seventeen and a half centimetres (six or seven inches) square over the position of the fœtal limbs; the whole then to be secured with a broad abdominal binder.

Discussing the value of rotation by forceps Dr. Craig disagreed with Dr. Donovan as to its dangers in expert hands. It was not a method to be taught to students, but in those cases in which the hand could not be introduced sufficiently far, he had found it by experience a proper treatment if the patient were fully anæsthetized and no undue force were used. In the average case, however, there could be no question that manual rotation according to Munro Kerr's method, with the fingers placed behind the anterior shoulder to insure that not only the head but the whole of the fœtal body was turned to the front, was the method to be advocated.

He concluded by thanking Dr. Gibson for his adequate and illuminating paper on a very difficult subject.

DR. DIXON HUGHES said he would like to support the method of applying the pads advocated by Dr. Gibson, because he had found, whilst at the Women's Hospital, Crown Street, that more uniform results were obtained by applying the single long pad over the side occupied by the fœtal limbs together with a firm binder fastened from above downwards, the latter keeping the pad in position and preventing any obliquity of the uterus. The second pad in the loin as described by Buist had been discarded, because, unless it was frequently attended to it invariably slipped up on to the edge of the child's back and so hindered rather than promoted a favourable rotation of the child. In one series of twenty cases of definite posterior position, this method had been successfully adopted. In only one case had the labour been completed by simple traction with forceps.

DR. FOURNESS BARRINGTON said he wished to thank Dr. Gibson for a very interesting paper and for presenting Australian statistics. He was in accord with the paper in general. He thought that with a head well flexed and unruptured membranes, the case should be left alone. When rotation of the child had to be done, the shoulder and the head should be rotated. He found Munro Kerr's method useful. He was strongly opposed to rotation with forceps. The forceps was essentially a tractor. He preferred to pull and let Nature produce rotation as she pleased.

DR. FOY wished to know if the application of the binder and pads predisposed to premature rupture of the membranes. He also wished to know whether Dr. Gibson had had experience of cases of "deep transverse arrest of the head" in which manual rotation could not be successfully performed.

DR. GIBSON in replying, said it was difficult to state a definite time when one should interfere. Each case had to be studied, but he did not believe in waiting till conditions such as Dr. Furber described, had arrived. In many cases spontaneous delivery occurred. In a few cases he had noticed the membranes ruptured prematurely when a binder and pad had been used, but it was not generally so.

He thought it was generally accepted that the placenta was on the anterior wall in occipito-posterior positions. With thin abdominal and uterine walls and with a small placenta, the limbs could be felt very prominently, but in a large number of cases he had found considerable difficulty in accurately outlining the fœtus due to the placental mass intervening on the anterior wall. Many years previously Dr. MacCulloch had pointed this out to him. In performing Cæsarean section he had noticed invariably that in occipito-posterior positions the placenta was on the anterior wall.

As regards the Buist method of applying pads, as it was some time since he had read the description of the method he agreed that Dr. Craig's description might be more accurate, but he had found in practice that if a long pad were applied over the limbs as described the results would be very satisfactory.

He maintained that in his opinion the region of the chin could be definitely palpated at a distinctly higher level than the occipital prominence in cases of vertex presentation and he had found it very valuable in estimating the amount of flexion of the head.

MEDICO-POLITICAL.

A MEETING OF THE COUNCIL OF THE SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the Lister Hall, Hindmarsh Square, Adelaide, on June 3, 1926, DR. H. H. E. RUSSELL, the President, in the chair.

Royal Commission on Health.

It was resolved that a special general meeting be called for the purpose of considering the report of the Royal Commission on Health; that the members be asked to come to the meeting prepared to discuss the report; that the attention of members be drawn to the fact that the report was published in THE MEDICAL JOURNAL OF AUSTRALIA of January 16, 1926.

Infectious Diseases Hospital.

It was reported that a deputation would wait on the Chief Secretary on June 8, 1926, in order to impress upon the Government the necessity of expediting the work of building a modern hospital for the treatment of patients suffering from infectious diseases.[1] The existing hospital accommodation was very inadequate and extremely bad.

[1] This deputation, comprising Dr. H. H. E. Russell, Dr. F. S. Hone and Dr. F. H. Beare, made out a good case for the immediate erection of a modern infectious diseases hospital at Northbridge on land that had already been purchased for the purpose. The Chief Secretary, after hearing the arguments of the three speakers, undertook to start the work at an early date.

The Medical Journal of Australia.

It was resolved that a copy of the resolution agreeing to the increase in price and size of THE MEDICAL JOURNAL OF AUSTRALIA be sent to the Australasian Medical Publishing Company, Limited.

Formation of Sections.

The subcommittee appointed to draw up rules governing the formation of sections of the Branch reported that it was waiting for copies of the rule in force concerning sections from the Victorian and New South Wales Branches of the British Medical Association.

Subcommittees.

The following were appointed members of the subcommittees of the Council:

Scientific Meetings Subcommittee.—The President, Dr. H. S. Newland, Dr. W. A. Verco, Dr. E. C. Black and Dr. F. N. le Messurier (convener).

Lodge and Ethical Subcommittee.—The President, Dr. F. St. J. Poole, Dr. E. A. Brummitt, Dr. M. W. Sprod and Dr. A. Kyle Gault.

Land for the New House of the Branch.

DR. H. S. NEWLAND stated that the British Medical Hall Company, Limited, had decided to purchase land on North Terrace and that a meeting would be called to obtain permission to sell the Hindmarsh Square building. He also stated that the British Medical Hall Company, Limited, suggested that the Council of the South Australian Branch should sell £691 3s. 6d. of Commonwealth War Loan and £403 12s. of inscribed stock and that the amount realized be lent to the British Medical Hall Company, Limited.

It was resolved:

That the Council sell £691 3s. 6d. Commonwealth War Loan and £403 12s. inscribed stock and lend to the British Medical Hall Company, Limited, the money derived therefrom and agree to accept preference shares to this amount when the company is reconstructed, to be issued to the Trustees of the South Australian Branch of the British Medical Association.

It was decided that Dr. R. H. Pulleine and Dr. R. E. Magarey, together with the President, confer with the British Medical Hall Company on matters regarding the land and buildings on North Terrace.

Reports of Council Meetings.

It was decided that the Council should determine whether any matters dealt with at the meetings are of interest to members and should be published in THE MEDICAL JOURNAL OF AUSTRALIA. THE MEDICAL JOURNAL OF AUSTRALIA would be advised of the decisions of the Council in regard to the publication of the results of its deliberations.

Letter from Dr. de Crespigny.

A letter was read from Dr. C. T. de Crespigny, the retiring President, thanking the Branch for the farewell message that had been dispatched by wireless.

Election of Members.

Dr. J. E. Porter and Dr. R. K. Stockbridge were elected members.

Model Lodge Agreement.

It was resolved that the matter of revising the model lodge agreement be referred to the Lodge and Ethical Subcommittee for immediate consideration and inquiry.

Whole-time Secretary.

Dr. H. S. NEWLAND spoke of the immense advantage that would be gained if a whole-time secretary of the Branch were appointed. The work was increasing and would increase still further as a result of the erection of new premises in North Terrace. He therefore moved:

That applications be called for the position of whole-time secretary at a salary of £450 *per annum*.

The motion was seconded by Dr. F. St. J. Poole and carried.

The President, Dr. W. A. Verco and Dr. F. N. le Messurier were appointed to consider the applications.

NOMINATIONS AND ELECTIONS.

THE undermentioned have been nominated for election as members of the New South Wales Branch of the British Medical Association:

Gribben, John, M.B., Ch.M., 1924 (Univ. Sydney), Tryon Road, Lindfield.

Playoust, Gabrielle Blanche, M.B., Ch.M., 1926 (Univ. Sydney), Woodside, Boulevard, Strathfield.

Smith, Alan Victor, M.B., 1924 (Univ. Sydney), Weston, New South Wales.

THE undermentioned has been elected a member of the Victorian Branch of the British Medical Association:

Spencer, J. C., M.B., B.S., 1925 (Univ. Melbourne), Melbourne Hospital.

Correspondence.

PAINLESS LABOUR.

SIR: I am engaged in a study of uterine inertia and would like to obtain details of as many cases as possible of painless or nearly painless labour. Perhaps some of your readers would report to your journal or to me direct, as preferred by them, such cases as have come under their notice.

Information as to the diet of the mothers, their general health, focal sepsis, duration of labour, symptoms during labour, character of pregnancy and recovery and vigour of infant would all be useful.

If the cases were reported through the journal they might be of value to other students as well as myself.

Yours, etc.,

MARY C. DE GARIS,
M.D., B.S. (Melbourne).

268, Latrobe Terrace, Geelong, Victoria.
June 10, 1926.

A BOYS' CLUB IN SYDNEY.

SIR: I am writing to you as a result of a conversation I had with Dr. R. Arthur, M.L.A. Together with some eight or nine Sydney 'Varsity men I am helping to run a boys' club in the poorer quarter of our city, namely Chippendale. The history of this little social service venture is simple. The Women's University Social Service Society asked Toc. H. to help them work among the boys in this semi-slum area. Our club is the result of that appeal. We hope to put the work on a permanent basis by forming a University social service society in which the men of the 'Varsity will have an opportunity of serving the less privileged boys and youths of at least one part of our city. Already Professor Harrison has consented to become president of the society.

My immediate aim in writing to you is to ask you if through your journal I might appeal to some medical men to personally interest themselves in this work by volunteering to give either a series of talks, lessons *et cetera* or occasional addresses to these lads on hygiene, the human body, first-aid *et cetera*. Our boys are "hard citizens" of

between the ages of eleven and fourteen and we want to give them a helping hand in the understanding of themselves and the problems life puts before them. The slightest interest displayed in their life by their seniors always calls out gratitude and interest from them.

Our club meets every Monday and Thursday night at the Settlement House, Edward Street, Chippendale (off Cleveland Street), and is open from 7 to 9 p.m. Should anyone care to respond to this appeal, will they write to me at 2, Challis Avenue, Marrickville?

Yours, etc.,

E. J. DAVIDSON (Reverend).

Challis Avenue,
Marrickville, New South Wales.
June 3, 1926.

Medical Appointments.

Dr. Alfred Oswald Barkley (B.M.A.) has been appointed Junior Medical Officer at Parkside Mental Hospital, South Australia.

* * * *

Dr. Roydon Herbert Minton Connell (B.M.A.) has been appointed Medical Officer of Health to the Meekatharra Road Board, Western Australia.

* * * *

Dr. Charles Bage (B.M.A.) has been appointed a Member of the Heatherton Sanatorium Board, Victoria.

* * * *

Dr. Whitfield De Witt Henty (B.M.A.) has been appointed Acting Medical Superintendent for the Hospital for the Insane and the Receiving House, Royal Park, Victoria.

* * * *

Dr. John Macquarie Alcorn (B.M.A.) has been appointed Government Medical Officer at Moss Vale, New South Wales.

* * * *

Dr. Ida Gertrude Margaret Halley (B.M.A.) has been appointed a Member of the Advisory Council of Education, South Australia.

* * * *

Dr. Frederick Edward Terrill (B.M.A.) and Dr. Michael Schneider (B.M.A.) have been appointed Honorary Anæsthetists at the Adelaide Hospital.

* * * *

Dr. Philip Goodman (B.M.A.) has been appointed Honorary Medical Officer to the Port Augusta Hospital, South Australia.

Books Received.

CONTRIBUTIONS TO OPHTHALMIC SCIENCE: Dedicated Dr. Edward Jackson in Honor of His Seventieth Birthday by His Pupils and Colleagues in The United States; 1926. Wisconsin: George Banta Publishing Company. Crown 4to., pp. 319.

THE ART OF MEDICAL TREATMENT WITH REFERENCE BOTH TO THE PATIENT AND TO HIS FRIENDS, by Francis W. Palfrey, M.D.; 1925. Philadelphia: W. B. Saunders Company; Melbourne: James Little. Royal 8vo., pp. 463. Price: 22s. 6d. net.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xx.

AUSTIN HOSPITAL, HEIDELBERG, VICTORIA: Junior Medical Officer (Male).

LAUNCESTON PUBLIC HOSPITAL: Junior Medical Officer.

ROYAL NORTH SHORE HOSPITAL OF SYDNEY: Honorary Relieving Medical Officer to Out-Patients (Temporary).

THE UNIVERSITY OF SYDNEY: Part-time Demonstrator in Physiology.

VICTORIAN RAILWAYS: Two Assistant Medical Officers.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester United Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND: Honorary Secretary B.M.A. Building, Adelaide Street, Brisbane.	Brisbane United Friendly Society Institute. Stannary Hills Hospital. Cook District Hospital.
SOUTH AUSTRALIAN: Honorary Secretary, 12, North Terrace, Adelaide.	Contract Practice Appointments at Ceduna, Wudinna (Central Eyre's Peninsula), Murat Bay and other West Coast of South Australia Districts.
WESTERN AUSTRALIAN: Honorary Secretary, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

JULY 1.—South Australian Branch, B.M.A.: Council.
JULY 2.—Queensland Branch, B.M.A.: Branch.
JULY 6.—New South Wales Branch, B.M.A.: Council (Quarterly).
JULY 6.—Tasmanian Branch, B.M.A.: Council.
JULY 7.—Victorian Branch, B.M.A.: Branch.
JULY 7.—Western Australian Branch, B.M.A.: Council.
JULY 8.—New South Wales Branch, B.M.A.: Clinical Meeting.
JULY 8.—Victorian Branch, B.M.A.: Council.
JULY 9.—Queensland Branch, B.M.A.: Council.
JULY 13.—Tasmanian Branch, B.M.A.: Branch.
JULY 13.—New South Wales Branch, B.M.A.: Ethics Committee.
JULY 13.—Section of Medicine, New South Wales.
JULY 14.—Northern Suburbs Medical Association, New South Wales.
JULY 15.—Section of Neurology and Psychiatry, New South Wales.
JULY 19.—New South Wales Branch, B.M.A.: Organization and Science Committee.
JULY 20.—Tasmanian Branch, B.M.A.: Council.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to "The Editor," THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, Sydney. (Telephones: MW 2651-2.)

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